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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,741	10/01/2004	Prakash EASWARAN	TI-38002	5740

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EXAMINER

KINKEAD, ARNOLD M

ART UNIT PAPER NUMBER

2817

DATE MAILED: 04/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/711,741

Applicant(s)

EASWARAN ET AL.

Examiner

Arnold M. Kinhead

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/21/04

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

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DETAILED ACTION

Drawings

Drawings filed 01-14-05 are entered.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Goldman (US 6,611,176).

The reference by Goldman discloses a filter circuit, with OP-AMP 23(see figure 1) included within a PLL(20); the op-amp having an input(44) and output(47) terminals, an input error signal being received on the input terminal(44).

Passive elements(both capacitive(C2) and resistive(R2)) are shown coupled in the input/output path. A first cap(C3)

and first resistor(R3, 610KOhms) are shown in series coupled to the input, and a second resistor(R1, 2.2

MegaOhms>>R3) is shown coupled in parallel. The phase lock loop comprises the standard reference signal

input(21) to PFD(22) to generate a correction signal based on the VCO output and reference input differences. The

active filter shown with OP-AMP(23). The charge pump is inherent, see table 2, for resistor values and charge pump

reference, which is part of the PFD in general. The VCO(26) is shown coupled to a divider(32).

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Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goldman(' 176) in view of Von Dolteren, Jr.(US 6,603,362).

The reference by Goldman discloses a filter circuit, with OP-AMP 23(see figure 1) included within a PLL(20); the op-amp having an input(44) and output(47) terminals, an input error signal being received on the input terminal(44).

Passive elements(both capacitive(C2) and resistive(R2)) are shown coupled in the input/output path. A first cap(C3) and first resistor(R3, 610KOhms) are shown in series coupled to the input, and a second resistor(R1, 2.2

MegaOhms>>R3) is shown coupled in parallel. The phase lock loop comprises the standard reference signal

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input(21) to PFD(22) to generate a correction signal based on the VCO output and reference input differences. The active filter shown with OP-AMP(23). The charge pump is inherent, see table 2, for resistor values and charge pump reference, which is part of the PFD in general. The VCO(26) is shown coupled to a divider(32).

The reference by Goldman does not show a ADC sampling the VCO output for use by a digital type circuit, however, this is conventional and the reference by Von Dolteren, Jr. is relied upon, see abstract and figure 3 and col. 4, that the VCO output is sampled(in ADC(50)) and made use of in the digital processing circuit(40) for further processing as required.

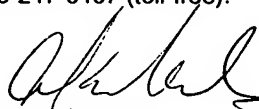
In light of the above it would have been obvious for one of ordinary skill in the art to have recognized that VCO' s are the central part of clock synthesis and PLLs, both analog, as in Goldman,(and hybrids) could make use of ADC' S to sample the VCO output for further processing as required downstream of the oscillator for precision tuning as was noted in the reference to Von Dolteren, Jr.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Arnold M. Kinkead whose telephone number is 571-272-1763. The examiner can normally be reached on Mon-Fri, 8:30 am -5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner' s supervisor, Robert Pascal can be reached on 571-272-1769. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Arnold M Kinkead
Primary Examiner
Art Unit 2817

Arnold Kinkead
March 29, 2006